GOVERNMENT OF THE DISTRICT OF COLUMBIA
OFFICE OF PLANNING

Testimony of

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before the
Subcommittee on Federalism and the Census

Hearing Topic: *"Two Plus Two Should Never Equal Three: Getting Intercensal Population Estimates Right the First Time"*

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TESTIMONY BEFORE THE CONGRESSIONAL SUBCOMMITTEE ON FEDERALISM AND THE CENSUS

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Intercensal Population Estimates for the District of Columbia

Good afternoon Chairman Turner and the members of the subcommittee. My name is Joy Phillips. I am the Associate Director of the State Data Center with the District of Columbia's Office of Planning. Thank you for the opportunity to be part of the hearing on "Two plus two should never equal three: Getting intercensal population estimates right the first time." I am here to testify about the District of Columbia's experience with the US Census Bureau on issues pertaining to the intercensal population estimates. My remarks will address the following areas: the challenge process; the challenge problems; impact of underestimation; and recommendations for improved estimates.

District of Columbia 2005 Challenge Process

The intercensal population estimates and its related products released by the Census Bureau each year are undoubtedly invaluable pieces of data for various levels of government, businesses, non-profit organizations and the public. Population estimates are relied on for program planning, survey controls, denominators for various indicators, and allocation of federal dollars. The accuracy of the population estimates is therefore of utmost importance given its many areas of use and its possible far reaching impact.

The release by the Census Bureau of each intercensal population estimate since 2001 brought added concern from Mayor Williams, other District of Columbia officials, managers, planners, researchers and the general public that something was totally wrong with the numbers. Information published by the Washington, DC Economic Partnership showed that over the past 5 years, Washington DC has emerged as the strongest and most resilient economy in the country, from office and residential real estate markets, to hospitality/tourism and educational institutions. Washington DC is said to have a development dynamic that is best illustrated by $13 billion worth of projects completed since 2001, and $7 billion currently under construction. In essence, the District of Columbia is in a state of economic renaissance with commercial and residential construction appearing in almost every neighborhood. Against this backdrop, after the Census reported a population count of 572,059 for 2000, it continued to report population decreases of approximately 4,000 persons each year, down to 550,521 in 2005. The pattern was similar to the 1990s, where after a count of 606,900 in 1990, the 1999 estimate by the Census was 519,000. But the actual count in 2000 showed a population of 572,059, a difference of 53,000 people. The District government was not about to sit silently by for another 10 years and experience among other things, an erosion of federal funding due to incorrect population numbers. More so, the numbers pointed to a loss of our children between the ages of 5-13 years (13.5 percent drop) and 15-19 years (28 percent drop) between 2000 and 2005.

The District of Columbia Office of Planning, State Data Center, with the approval of the Mayor, contacted the Census Bureau for an explanation of the declining population. The Census responded with an explanation of the methodology and an invitation for a forum with open discussion on population estimates. This invitation was accepted and the session was conducted at the Metropolitan Washington Council of Governments (MWCOG) meeting room in 2005. A

presentation was made by the Census Bureau to the MWCOG forecasting committee consisting of representatives from member counties in the Washington Metropolitan area: some of which were also displeased with their census estimates.

This meeting, however, did not temper the concerns of the District of Columbia representatives. Shortly thereafter the decision was made to challenge the Census estimates. The Census Bureau was informed that the District was preparing to file a challenge and requested the necessary procedures and documents to fulfill this activity. After the release of the 2005 population estimates in December 2005, the District was ready to act. The 2005 population estimate for the District of Columbia (550,521), as published by the Census Bureau, was significantly lower than the DC Office of Planning estimate (577,899), and could not be reconciled with various activities including net new residential construction, residential utility connections, school enrollment, and individual tax filers data for the city. In accordance with the Census Bureau's Review Guide for Local Population Estimates, the District prepared and submitted a population estimate based on the Housing Unit Method as an alternative to the estimate of the Census Bureau.

Housing Unit Method

Net Residential Construction

Building permits and demolition data from 1999 through 2005 were collected and analyzed thoroughly. Records were examined for accuracy using a series of steps including coding consistency, duplicates identification and removal, and address to SSL matching (square, suffix, and lot). In cases of missing data, housing unit counts were verified from other development information such as special development approvals, tax records, Geographic Information Systems (GIS) tools, and aerial photography from 1999, 2003 and 2005. The data showed that

there were 8,101 new residential units completed between April 1999 and November 2004, and 2,179 residential units demolished between April 2000 and June 2005, resulting in 5,922 net new residential units added to the housing stock in the District of Columbia (Tables 1 & 2).

Table 1: Residential Construction by Unit Type (April 1999 and November 2004)

Unit Type	1999	2000	2001	2002	2003	2004	1999-2004
Single Units	413	191	126	415	104	212	1,461
Muti-Units	252	729	1,432	1,438	1,684	1,105	6,640
Total Units	**665**	**920**	**1,558**	**1,853**	**1,788**	**1,317**	**8,101**

Source: District of Columbia Office of Planning
Note: Reporting period was selected based on the Census Bureau's requirements.

Table 2: Residential Demolition by Unit Type (April 2000 and June 2005)

Unit Type	2000	2001	2002	2003	2004	2005	2000-2005
Single Units	77	100	51	28	31	44	331
Muti-Units	556	277	88	563	346	18	1,848
Total Units	**633**	**377**	**139**	**591**	**377**	**62**	**2,179**

Source: District of Columbia Office of Planning
Note: Reporting period was selected based on the Census Bureau's requirements.

Given Census 2000 data as a base, the number of housing units in 2005 was 280,605. Assuming an occupancy rate of 0.90356 (Census 2000) gives a total of 253,543 occupied housing units. Applying a household size of 2.11 (Table 3), the 2005 estimate of persons in households plus the group quarters population of 42,923, brings the total to 577,899 persons. In summary, the District of Columbia's population estimate for 2005 is 27,378 persons (5 percent) more than the Census Bureau's estimate of 550,521 persons.

Table 3: Average Household Size

	2000 (Census)	2001	2002	2003	2004	2005
Overall Average	2.16035	2.16	2.15	2.14	2.13	2.11

Source: District of Columbia Office of Planning

Supplemental Information

Although the following was not required for the housing unit method, the decision was made to submit the additional information to supplement the building permits information and further validate the District's population estimate.

Residential Utility Connections

Residential utility connections data were obtained from utility companies serving the District of Columbia's residents. The data from the Potomac Electric Power Company (PEPCO) was utilized for the purpose of the challenge. As shown in Table 4, there was a general increase in the number of residential units served between 2000 and 2005, an increase from 264,948 to 269,509, respectively. This resulted in a net addition of 4,561 residential customer units.

Table 4: Number of Active Residential Electricity Utility Connections

	Individual Meters	Master Meters	Units on Master Meters	Total Units
April 1, 2000	194,147	1,388	70,801	264,948
July 1, 2001	194,925	1,311	70,351	265,276
July 1, 2002	196,052	1,296	68,892	264,944
July 1, 2003	198,228	1,247	67,972	266,200
July 1, 2004	200,850	1,234	66,379	267,229
July 1, 2005	203,561	1,200	65,948	269,509
Source: Potomac Electric Power Company (PEPCO)				

School Enrollment

Over the past five years, school enrollment options in the District of Columbia have become more diverse. Data obtained from the DC State Education Office showed the traditional District of Columbia Public School (DCPS) enrollment levels declining from 68,015 students in the 2001-2002 school year, to 61,710 students in the 2004/2005 school year (a decrease of 6,305

students). On the other hand, the Charter Schools under the umbrella of the Board of Education Charters and the Public School Board show enrollment at 10,651 students in 2001/2002 and increasing to 15,163 students in 2004/2005 (an increase of 4,512 students). These data suggest that the majority of District's children missing from traditional DCPS transferred to one or the other type of charter schools. Comparative data for home-schooled students was unavailable for the same time period. However, data obtained from the Association of Independent Schools of Greater Washington (AISGW) for private schools in the District of Columbia that are members of the association showed a slight increase from10,998 in 2003-2004 to 11,207 in 2005-2006. District of Columbia Public Schools, Office of Federal Grants Programs, list FY 2005 nonpublic schools enrollment for DC residents at 5,762 in 2005 and 5,915 in FY 2006. In addition, the National Center for Education Statistics (NCES), which conducts bi-annual surveys of all schools, listed private school enrollment numbers in the District of Columbia at 16,690 in 1999/2000 and 16,376 in 2003/2004. In essence, the children of the District of Columbia residents remain in our schools and in our city in 2005 just as they were in 2000. The major change was the movement of some students to charter schools. Thus, the numbers published by the Census which showed the District losing children between the ages of 5-13 years (8,070 or 13.5 percent drop) and 15-19 years (10,668 or 28 percent drop) between 2000 and 2005 are contradicted by the enrollment data for DCPS, charter schools, and private schools.

Tax Filers

The method used to calculate the District's population estimate involves taking the 2000 census population as the base, adding births, subtracting deaths, and estimating international and domestic migration. Domestic migration is measured through comparisons of income tax returns from two years, counting the number of returns (and dependents) living in the District both years, moving into the District, and moving out of the District. This calculation, as performed by the Census Bureau, yields a large net out-migration rate – i.e., more people moving out than moving in. The problem with this methodology is that using matched income tax returns looks only at households and people who file tax returns in both years. Those who file only in one year, or not at all, are not part of the process. This distorts the migration rate, because people who don't file tax returns - in some instances, because they have no taxable income – are less likely to move out of the District than people who do file tax returns (conclusion supported by researchers like Patricia Becker in her work on "Differential Migration as a Factor in Population Estimate Methodology," ASA 1990; and Donald E. Starsinic in "Development of Population Estimates for Revenue Sharing Areas," Bureau of the Census Report, 1974). In fact, if there were a drastic decline in the number of tax filers with dependents, this would have been reflected in the total school enrollment. As stated above, enrollment numbers for the combined DCPS and Charter Schools do not support a drastic decline in the population. Further, data obtained from the DC Office of Tax and Revenue showed the number of individual tax filers at 297,250 in 2004, down slightly from 298,365 in 2000, a 0.4 percent decrease.

Challenge Problems

There were mainly two problems encountered in the preparation of the challenge. These were:

- Lack of information sharing
- Labor intensiveness

Lack of Information Sharing

The ability to update the group quarters population numbers so that they are directly comparable to the 2000 group quarters data required two critical pieces of information. One was the sharing of the same list of group quarter entities as used by the Census Bureau in 2000 with the State Data Center. The other was the same or exact understanding of the definition of group quarters by the State Data Center as the Census Bureau. Upon request to the Census Bureau to share this list of group quarter entities, the Bureau invoked the agreements of Title 13 forbidding them to share the list of group quarters statistics they used in the 2000 census count. In the absence of this list, the State Data Center had no choice but to resort to its own understanding of the definition of group quarters. Subsequently, the data submitted for 2005 to the Bureau was rejected on the grounds of not being directly comparable. Thus, the additional 7,000 persons in group quarters in 2005 (42,923) over 2000 (35,600) were not included in the Census Bureau's revision of the estimates.

Labor Intensiveness

The information required for the various challenge options, did not reside at the DC State Data Center (the office that partners on a daily basis with the Census Bureau), a common problem in many states and cities. Therefore, gathering the necessary data for the challenge demanded much legwork, new agreements, manipulating systems not built for retrieval of the data needed, and convincing external agency managers of the critical nature of our data needs. This challenge

process for the Office of Planning took hundreds of hours of manpower sorting through files that had already been archived, records that lacked some critical information, records that were duplicates, and in some cases, records that just did not exist. At the end of the day, a combination of methods, including aerial photography, actual site visits, interviews with ward planners, and statistical analyses produced results that we were confident of.

Impact of Underestimation

The impact of underestimating the population in any area goes beyond the importance of fair representation of residence in federal and state legislatures. The decennial and intercensal population estimates are the basis for the distribution of funds for various programs, such as health, housing, community and economic development, transportation, job training, and low income energy assistance. While it is understood that funding formulas are very complex, and provides different amounts of funding for different groups of people, it is unquestionable that there is a fiscal impact to states, counties and cities whose population are underestimated. To date, we have not identified any national data that exist on the fiscal impact of population underestimates on states, cities, or local governments. However, drawing from an analysis of information obtained from a survey of 34 cities, and data gathered from various grants awarded to the District of Columbia from 2000 through 2006, some conclusions could be derived on the fiscal impact of population underestimates.

In an effort to estimate the impact of the 1990 undercount on cities, and to estimate the likely impact of similar inaccuracies in the 2000 census, 34 cities were surveyed and findings reported in a document entitled 'The Fiscal Impact of the Census Undercount on Cities A 34-City Survey,' which was prepared and published by the Conference of Mayors in January 1999.

Cities were asked to report on federal and state funds they had lost over the last decade due to the 1990 census undercount – both total dollars and per person dollars lost. Total loses in federal and state funds in all 34 cities amounted to $536 million. The average amount lost to the cities during the 1990s averaged $1,230 for each person (or $123 per person each year) not counted in the city.

In the absence of any specific data on per person dollars loss for the District of Columbia, if the above conclusions are applied, then the city would have lost about $738,000 of direct federal funds each year since 2001, and 3.7 million dollars over the 5 year period from 2001-2005, without taking inflation into consideration. (Adjustments from the newly approved 2005 population estimate of 582,049 resulted in an additional 31,700 persons over the Census Bureau's previous estimate of 550,341. This gives an average of 6,342 persons underestimated each year. At a rate of $123 per person, 6,342 persons translates into $738,000 of federal funds lost each year and 3.7 million over the 5 year from 2001 through 2005).

The second area of analysis employed was to identify each of the grants awarded by the federal government to the District of Columbia between October 2000 and July 2006 that had population based formulas in their determination. This task, given the short turn around period required, yielded a total of 145 grants that were awarded based on population formulas. The funds awarded totaled over $477 million dollars. If the assumption is made that 5 percent of this total was lost through the underestimation of the population, then the district would have lost over $23 million dollars. If a more conservative assumption is made by using 1 percent as the total lost, that results in about $5 million dollars.

The impact of underestimation in the District is of particular concern since it affects resources available to our children. According to the Census Bureau, the District loss 13.5 percent (8,070) of its 5-13 year olds, and 28.2 percent (10,668) of its 15-19 year olds between 2000 and 2005. An underestimation of children means that a significant number of kids that need assistance are not even included in the data used to distribute public funds. City governments must therefore maintain educational and social services programs to serve these children in the absence of financial support from federal agencies. Children are approximately 50 percent of Medicaid recipients. Federal programs like foster care, Women Infants and Children (WIC), special education and the Child Care and Development Block grant are all focused on children. The fiscal impact of the underestimation is especially noticeable in cities like the District of Columbia where social problems are severe.

Underestimations also affect private sector decisions. Inaccurate data leads businesses, private foundations and nonprofit organizations to make misguided decisions about where to focus resources or may even lead to missed business opportunities.

In addition to direct fiscal impacts there are also indirect impacts as well. Among them are the effects on grants that consider population either in share numbers or as denominators for rates. For instance, the District of Columbia came close to loosing its annual $20 million allocation for its declining teen age pregnancy rate due to the reported drop in the number of teenage population by the Census Bureau. There are also competitive grants where increased documented need based on census data can increase a jurisdictions ability to obtain the grants. Further, statistical sampling can be distorted from the use of incorrect population data.

How can the Census Bureau improve on the reporting of our population estimates?

Our recommendations are for:

- More direct communication between the Census Bureau and the entities that collect and maintain key data items used in the tabulation of population estimates. There should be a trigger in cases where there is a dramatic increase or decrease in the population trend from previous year(s). This trigger should initiate a request for explanatory information at the state, county, or city level.
- An approach utilizing a combination of the population components method and the housing unit method, or the housing unit method used as a check on the population components method. While the population component method employs vital events (births and deaths) and net migration to produce population estimates, there is always room for administrative error in either of these subcomponents. The additional use of the housing unit method, whether building permits, certificates of occupancy, or utility connections will help to highlight any irregularities that may have occurred from the population component method. Thus, the housing unit method can be used as a quality control on the population component method.

In closing, we urge the Congress to support a more accurate population estimate by committing the necessary support and funding now and in the future to the Census Bureau. The benefits of accurate population counts and estimates are clear, and both the public and private sectors benefit when data are both current and accurate.

Thank you. I would be happy to answer any questions from members of the subcommittee.